REMARKS

A. Status of the Claims

Claims 16-21 and 27-40 are pending, with claims 27-30 being withdrawn from consideration. Currently, claims 16 and 32-40 are allowable, and claims 17-21 and 31 stand rejected.

Claims 17-21 and 31 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lock et al. (Microbial Pathogenesis 21:71-83, 1996) ("Lock") in view of Paton et al. (Infect. Immun. 54:50-55, 1986) ("Paton") or Walker et al. (Infect. Immun. 55:1184-1189, 1987) ("Walker").

Claim 17 has been amended to claim variants of the pneumolysin nucleic acid sequence of SEQ ID NO: 1 and to further recite "and wherein said modified pneumolysin polypeptide is soluble, elicits antibodies which are cross-reactive with wild-type pneumolysin, and has attenuated hemolytic activity."

B. Rejection under 35 U.S.C. § 103(a)

Claims 17-21 and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lock in view of Paton or Walker. Applicants respectfully traverse this rejection.

According to the Office Action, Lock teaches "a pneumolysin-producing strain of type 14 *S. pneumoniae* which comprises the nucleotide sequence of the pneumolysin." Conceding that Lock does not expressly teach a recombinant nucleic acid molecule comprising the pneumolysin nucleic acid sequence of wild-type serotype 14 *S. pneumoniae*, the Office Action turns to Paton for an alleged teaching of "how to routinely obtain and clone a recombinant pneumolysin DNA from a strain or serotype of *S. pneumonia*. Likewise, Walker

also allegedly teaches the "routine isolation of a recombinant pneumolysin DNA from a strain or serotype of *S. pneumoniae* and cloning it." [Office Action, page 4]. The Office Action asserts that "it would have been obvious to one of ordinary skill in the art at the time of the invention to obtain the recombinant pneumolysin nucleic acid molecule from Lock's pneumolysin-producing serotype 14 *S. pneumoniae* using Paton's or Walker's method of obtaining a recombinant pneumolysin nucleic acid or DNA to produce the instant inventon with a reasonable expectation of success." [Office Action, page 4].

Applicants respectfully traverse this rejection. However, for the purpose of further prosecution and without waiver of Applicants' right to claim cancelled subject matter in a continuation application claiming priority herefrom, Applicants have amended claim 17 so that it covers nucleic acid molecules encoding variants of the wild type pneumolysin having the amino acid substitutions recited in the claims. Applicants have also amended the claim to recite that such modified pneumolysins are soluble, elicit antibodies which are cross-reactive with wild-type pneumolysin, and have attenuated hemolytic activity.

None of the cited publications teach or suggest such modified pneumolysins and Applicants respectfully request withdrawal of this ground of rejection.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **50-3732**, Order No. **13564-105004US3**. In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **50-3732**, Order No. **13564-105004US3**.

Respectfully submitted,
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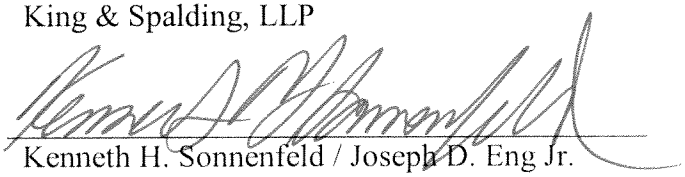
Dated: December 17, 2009 By: 

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